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the source of the lime, though he by no means intends to assert the impossibility of its being derived from the shell.

*On the Placenta.* *By Sir* Everard Home, *Bart. V.P.R.S.* Read June 27, 1822. [*Phil. Trans.* 1822, *p.* 401.]

After adverting to the discovery of the unattached human ovum in the uterus, and to the formation of the placenta independent of the chorion, the author proceeds to show that the office of the placenta, and when that is wanting, of the chorion, being to supply materials for the growth of the embryo, it varies in structure, and has a peculiar form in every genus of animal, and is to be considered as the means employed by Nature to prevent the whole system respecting animals from being thrown into confusion by any two different genera continuing to interbreed with one another, and which cannot take place without a new form of placenta is employed, for which there is no provision. The author then states that the period of utero-gestation depends upon the structure of the placenta or chorion; that where they are very vascular it will be short, and where the reverse very long; and that where the female of one species breeds from the male of another, whose utero-gestation is different, the hybrid is brought forth at the end of the longest period of the utero-gestation of the species concerned. Sir Everard thinks that the placenta and chorion are instrumental in producing the stimulus, in consequence of which parturition comes on; for as soon as double circulation takes place in the fœtus, which is not till the lungs are perfected, the placenta is so much diminished, that this alone may produce a separation of the placenta and chorion, and expulsion of the young. The author concludes this paper with a specimen of a new classification of animals, founded upon the variation of structure of the placenta, of which the first class only is given, including animals in which the ovum becomes attached to the womb of the mother. This class comprises seven orders, distinguished by peculiarities in the structure of the chorion and placenta.

*Of the Geographical Situation of the Three Presidencies, Calcutta, Madras, and Bombay, in the East Indies.* *By* J. Goldingham, *Esq. F.R.S.* Read June 27, 1822. [*Phil. Trans.* 1822, *p.* 408.]

From an extended series of observations of the eclipses of Jupiter's satellites, corrected for the difference of the tables from the observations taken at Greenwich, at or about the time of each eclipse, the mean longitude of the Observatory at Madras is 80° 17′ 21″ E., and the mean latitude found by meridional observations of the sun and stars north and south of zenith, taken with the sextant, circular instrument, and zenith sector, is 13° 4′ 9″ N.

By a series of corresponding eclipses of Jupiter's satellites, taken at Fort William, the longitude of the Fort appears to be 88° 23′ 39″ E.